Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Joint Application by BellSouth Corporation,	)	CC Docket No. 02-150
BellSouth Telecommunications, Inc.	)	
and BellSouth Long Distance, Inc., for	)	
Provision of In-Region, InterLATA	)	
Services in Alabama, Kentucky, Mississippi,	)	
North Carolina, and South Carolina	)	
	)	

DECLARATION OF CHRIS FRENTRUP
ON BEHALF OF WORDLCOM, INC.

Based on my personal knowledge and on information learned in the course of my duties, I, Chris Frentrup, declare as follows:

I. INTRODUCTION AND SUMMARY

1. My name is Chris Frentrup. I am employed by WorldCom, Inc. ("WorldCom") as a Senior Economist in the Public Policy Analysis Group of the Federal Advocacy organization. In that position, I am responsible for analyzing economic issues relating to telecommunications industry regulation and public policy, and assisting in the development and advocacy of WorldCom's public policy positions. I have filed declarations in review of several previous Bell company 271 applications. I have also participated in the development and advocacy of the HAI Model, a model used in the estimation of telecommunications network costs.

2. The purpose of my Declaration is to demonstrate that BellSouth's current unbundled network element ("UNE") rates in Alabama, Kentucky, Mississippi, North Carolina and South Carolina are not based on total element long run incremental cost ("TELRIC"), despite BellSouth's claims to the contrary in its recently filed section 271 application.

3. First, in all five of these states BellSouth incorrectly uses different technologies to model loop costs, depending on the intended use of the loop. This approach means that the cost model does not capture all the economies of scope inherent in the network, and results in excessive loop rates. BellSouth also fails to use integrated digital loop carrier ("IDLC") when modeling some technologies resulting in overstated costs. Even when BellSouth does model its costs using the integrated digital loop carrier ("IDLC"), it fails to use only IDLC which meets the GR-303 industry standard, which is the forward-looking and lower cost technology.

4. Second, BellSouth uses unsupported and excessive "in-plant" factors and loading factors in all five states to determine the cost of engineering, furnishing and installing its plant. It is clear that these factors add significantly to the cost of UNEs, and that they exceed reasonable levels.

5. Third, BellSouth's rates for Optional Daily Usage Files ("ODUF") and Access Daily Usage Files ("ADUF") charges in Alabama and South Carolina are excessive and do not reflect the purported regionality of BellSouth's Billing Information Systems.

6. Fourth, BellSouth's rates for UNE-P Service Ordering and installation in Alabama, Kentucky, Mississippi and South Carolina are excessive and do not reflect the purported regionality of BellSouth Operational Support Systems (OSSs).

7. Fifth, BellSouth UNE rates in South Carolina are not deaveraged based on cost, but instead are deaveraged based on retail rates zones, substantially inflating the costs in densely populated areas.

8. For all of those reasons the Commission should reject BellSouth's application. Until these errors are fixed, CLECs will be required to pay excessive UNE rates, to the detriment of competition and the harm of consumers.

II. BELLSOUTH'S UNE RATES IN ALABAMA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA AND SOUTH CAROLINA DO NOT COMPORT WITH TELRIC PRINCIPLES

9. In setting its rates for UNEs, BellSouth and the Alabama, Kentucky, Mississippi and South Carolina Public Service Commissions and the North Carolina Utilities Commissions ("PSCs") made a number of methodological and input choices that fail to comport with TELRIC principles. Because correcting some of these errors would require redesigning certain aspects of the cost models, WorldCom is not able to quantify the precise effect of all of these errors. Other errors, however, can be corrected by an input change, and the effect of correcting these errors is quantified to the extent possible in the discussion infra. The net effect of all these errors is the UNE rates are currently set significantly above their TELRIC levels.

III. THE METHODOLIGIES USED TO SET UNE RATES IN THE FIVE APPLICATION STATESARE NOT TELRIC-BASED

10. WorldCom has identified several input and model design issues that result in an overstatement of costs in Alabama, Kentucky, Mississippi, North Carolina and South Carolina.

A. Shifting Methodologies

11. BellSouth improperly uses multiple scenarios with different mixes of IDLC and universal digital loop carrier ("UDLC") to compute different rate elements. For example, incorrectly claiming that unbundled loops cannot be served by IDLC, BellSouth runs its loop model using all UDLC for stand-alone loops, while using a mix of UDLC and IDLC for UNE platform loops. In addition, BellSouth performs runs of its models with no DLC of any kind to price asymmetric digital subscriber loops ("ADSL").

12. This approach is inconsistent with a TELRIC methodology for two reasons. First, it fails to use the forward-looking technology – IDLC – in cases where fiber feeder is used. This error is compounded by BellSouth's failure to model the use of only IDLC that meets the forward-looking industry standard GR-303 protocol. Contrary to BellSouth's assertion, unbundled loops can readily be provisioned form IDLC that uses the GR-303 protocol, and failure of its cost model to do so means that the model does not meet the forward-looking, least cost mandate of the TELRIC requirement.

13. In addition, by running different scenarios for different purposes, BellSouth is not following the TELRIC requirement that a model reflect all uses of the network. Modeling different networks for different purposes results in loss of the economies of scope that occur in a multi-use network. The FCC's conclusion that this is not so, Georgia/Louisiana Order¶ 41, fails to take into account the diseconomies from designing networks for customer demand that could not be served efficiently using that particular network design.

14. For example, in the development of the unbundled copper loop rates, BellSouth models an all copper network to reach all customer locations assuming the existing location of BellSouth's wire centers. In order to connect all customer locations with BellSouth's wire centers, the engineering design limit contained in the cost model for maximum copper loop length was changed to 1,000,000 feet. The model thus assumed some ridiculously long copper loops (i.e. loops that would not even function to provide any service). Customers this far from a wire center could obviously receive ADSL service more efficiently through the use of remote terminal and fiber optic facilities. By assuming the existence of such long copper loops and averaging the cost of such loops with the shorter loops that would exist in an efficient network, BellSouth's model overstates the cost of a copper loop.

15. It is not possible to quantify exactly the effect of this error but it is substantial. Correcting the error would require modification to the engineering assumptions contained in BellSouth's cost model so that all digital loop carrier used was GR-303 complaint IDLC. It would also require modifying the demand assumptions utilized by the model so that a mixed-use network was modeled. Nonetheless, it is clear that a properly designed model would significantly lower the cost of loop. Of the five different networks, that BellSouth's model constructs, the model for POTS services most accurately reflects overall costs in part because POTS services are the most frequently ordered service and in part because that model uses IDLC. In South Carolina, for example, the unbundled stand-alone loop cost, which is developed from a model that uses only UDLC, is $2.77 a month more than the same loop when it is sold as part of a UNE platform, which uses IDLC, not all of which meets the GR-303 standard.[1] If the UNE platform loop were provided using only GR-303 compliant IDLC, this cost difference would be even greater because the UNE platform loop cost would be lower. The stand alone loop cost, if properly modeled, would therefore be much lower.

B. Loading Factors

16. Further, the BellSouth cost models fail to comply with TELRIC in their computation of total plant investment through the application of "in-plant" factors and loading factors to the material investment. The equipment prices that are used as inputs in the cost models are only the price of the materials themselves – the switch, copper cable or fiber cable

[1] The statewide average cost for a stand-a-lone voice grade SL1 in South Carolina is $22.00 while the statewide average UNE-P loop cost is $19.237.

itself.[2] The engineered, furnished, and installed ("EF&I") cost of the equipment is then determined by applying factors to that material cost.

17. Given the manner in which BellSouth developed them, these factors function as closure factors to bring the material investment amounts determined by BellSouth cost models more in line with BellSouth's embedded book investment. It is clear that these factors are excessive and capture some of the cost inefficiencies reflected in BellSouth's books of account that should not be reflected in a TELRIC cost study. Among the evidence that the factors are improperly determined is the fact that they vary substantially from state to state by more than can be explained by any labor or other cost differences. For example, the material in-plant loading factor for digital switching equipment in Kentucky was 28% higher than in the factor used for this equipment in Mississippi , even though the cost of engineering and installing digital switching equipment should not vary significantly by state. The only reason why BellSouth's material loading factor for digital switching does vary significantly by state is because it is based on the cost captured by BellSouth's embedded books of account.

18. In a forward-looking network, the cost of capitalized installation and maintenance would almost certainly decline by more than material costs. In a forward-looking network, for example, there would be little need for field work either to install loops or to maintain them, as is reflected in the embedded ratios used to develop these factors. Loops could be installed via a circuit board and maintained by electronically taking circuits off line. The radical decline in forward looking installation and maintenance costs means that use of a factor based on a historical ratio of such costs to material costs overstates overall forward looking costs.

[2] It is important to note that in South Carolina, the switching rate (and the total non-loop rate) exceeds that in Georgia and Louisiana after taking into account cost differences between the states.

19. The loading factors add a significant amount to the total cost of the UNEs. For example, the cost of an unbundled loop is approximately doubled by use of these factors. Much of the added cost is inappropriate. In AT&T & WorldCom's filings, WorldCom calculated the installed cost of loops and switches based on the fully loaded material costs used in the Commission's universal service model. This is entirely appropriate as there is no difference in the fully loaded material costs for universal service purposes or for calculating UNE costs.

20. Furthermore, in pending Florida and Georgia UNE cases, AT&T and WorldCom provided an itemization of the effect of the recommended input changes.[3] These itemizations show that the loading factors employed by BellSouth cause forward looking cost to be overstated by at least 15%. Further, since in the development of the approved UNE rates, the 5 state commissions in the states for which BellSouth is applying for section 271 authority made no adjustments to BellSouth's proposed loading factors, it is reasonable to conclude that the currently effective loop and switching rates in these states are also overstated by at least 15% as a result of these factors alone.

21. In addition, because BellSouth applies the same loading factors to all sizes of equipment, the factors significantly skew the costs across geographic areas. In particular, they result in rates that exceed actual cost by far more in densely populated areas than in other areas, meaning that in these areas rates are far more than 15% above cost. The reason is that the cost for laying a cable or placing a switch does not vary linearly with size, e.g., it does not require twice as much expense to lay a 2400 pair cable as it does to lay a 1200 pair cable. But BellSouth's loading factors assume that it does, and thus attribute excess costs for installation in the densely populated areas in which larger cables can be used. Thus, the application of a single

factor to determine EF&I costs overstates BellSouth's UNE costs, especially in more densely populated areas.

IV. PURPORTEDLY REGIONAL SYSTEMS SHOULD HAVE REGIONALLY CONSISTENT RATES

A. DUF Charges

22. BellSouth contends that the Billing Information Systems it uses to process, record and transmit Access Daily Usage file and Optional Daily Usage File data are the same for all the states it serves, and the cost support it filed in these 5 states reflected this contention. However, the ADUF and ODUF rates currently in effect in Alabama and South Carolina are significantly higher than the rates currently in effect in the other BellSouth states.[4] The reason that the ADUF and ODUF rates in these two states are inconsistent with the rates in the other states is because the cost studies used to support the rates were found to be flawed and were corrected by the other states or were voluntarily corrected by BellSouth. For example, BellSouth recently voluntarily reduced its ADUF and ODUF rates in Mississippi and North Carolina.[5] However, BellSouth has failed to correct its ADUF and ODUF rates in Alabama and South Carolina.

23. These excessive charges add significantly to the cost of serving a customer. Assuming that these charges are assessed only for the originating side of a call, WorldCom estimates that the monthly charge for an average customer for these DUF will be at least $1.21 in South Carolina and $1.06 in Alabama, almost double the approximately $0.58 charge in Georgia, Kentucky, Louisiana, Mississippi and North Carolina. As such, at a minimum, the

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[3] Georgia PSC Docket 14361-U revised exhibit JCD-BFP-Q, 4/30/02 and Florida PSC Docket No. 990649A, Late Filed Hearing Exhibit 70.

[4] The per message ADUF rates range from 0.001825 in Louisiana to 0.001862 in Georgia, but are 0.007037 in Alabama and 0.008061 in South Carolina. In addition, the per message ODUF rates range from 0.002446 in Louisiana to 0.0027366 in Tennessee, but are 0.004101 in Alabama and 0.004704 in South Carolina.

DUF charges in South Carolina and Alabama should be reduced to no more than the Georgia and Louisiana level before BellSouth's section 271 application for these states is approved.

24. In reality, BellSouth's DUF charges should be eliminated altogether. BellSouth already recovers Billing Information Costs as part of its shared and common costs. Although BellSouth purports to have backed out the billing information cost associated with the provision of DUF data to CLECs from the billing information cost included in its shared and common cost factors, the costs that BellSouth backed out do not appear to be for DUF systems but rather for costs in the same category that actually represent unassociated software expense that was capitalized.

25. Further, permitting BellSouth to allocate shared and common costs, for billing information systems, increases the probability of unreasonable discrimination. The only way to fully ensure that shared costs, such as billing information system costs, are recovered on a non-discriminatory basis is for those costs to be recovered from all parties that benefit from the systems, including BellSouth, the independent telephone companies and the competitive local exchange carriers. As such, separate charges for billing information system data (i.e. DUF) should not be permitted and any forward looking cost used to develop rates for DUF should be included in the shared and common cost factors and recovered from all parties that use those systems.

B. OSS Charges

26. In each of the 5 states, BellSouth attempts to recover the cost of OSS development through Service Ordering and Installation charges. As shown in Attachment 1, BellSouth's Service Ordering and Installation charges for UNE-P are significantly different from

[5] Mississippi SGAT filing 1/9/02 and North Carolina SGAT filing 5/7/02.

state to state. In Alabama, Kentucky, Mississippi and South Carolina these charges significantly exceed the levels reviewed in the Georgia and Louisiana 271 case. The rates are approximately double those in Louisiana, 50 times those in Georgia, and are approximately 100 times those in North Carolina.[6]

27. These rate differences are not based on differences in cost. BellSouth contends that its Service Ordering and Installation systems for UNE-P are regional. As such, BellSouth's cost based rates for service ordering and installation should be consistent state to state.

28. The rates in Alabama, Kentucky, Mississippi and South Carolina should be reduced so that they are no more than Georgia and Louisiana levels.

29. Indeed, under proper TELRIC principles, there should be no separate OSS charge at all. WorldCom explained why at length in the Virginia arbitration as a generic matter. Here, what is important to note is that Bellsouth recovers its OSS development costs through its common cost factor and should not be permitted to double recover those costs.

C. South Carolina Rates Are Not Deaveraged Based on Cost

30. BellSouth's South Carolina rates cannot be accepted as TELRIC rates for yet another reason. These rates have not been properly deaveraged. BellSouth has deaveraged its rates based on retail rate centers, rather than based on cost. End users are grouped in retail rate centers based on what they pay in local retail rates, not based on cost. In South Carolina, cost is not a factor in the decision used to determine which wire centers are place in which deveraged rate zone. Some high cost wire centers are included in Zone 1 in South Carolina; some low cost wire centers are included in Zones 2 and 3.

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[6] The rates in Georgia and North Carolina are not set on a per order basis as in the other states. In Georgia, for example, OSS costs are $500 for the first 1000 orders and $110 for each

31. The result is that there is no zone in South Carolina that groups relatively low cost wire centers. Not surprisingly then, there is no zone in the state in which CLECs can profitably provide basic local service. Furthermore, the non-loop rates in South Carolina cannot be supported by a benchmark analysis. Per the Commission's Synthesis Model (SM), the non-loop costs in South Carolina are 10 percent above those in Georgia, but the rates are 18 percent higher. Similarly, South Carolina SM costs are 28 percent lower than in Louisiana, but the rates are 25 percent higher. Clearly, non-loop rates in South Carolina are set above TELRIC levels.

VI. CONCLUSION

32. The problems with the BellSouth cost models and the inputs indicate that the resulting UNE costs are clearly not cost-based, although the full magnitude of the error cannot be determined on the partial information provided in BellSouth's application. Unless BellSouth corrects its UNE rates to adjust for the problems outlined here, the Commission should reject BellSouth's section 271 application for Georgia and Louisiana.

33. This concludes my Declaration on behalf of WorldCom.

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additional 1000 orders. I converted these rates to per order rates by assuming a volume of 5,000 orders per month.